

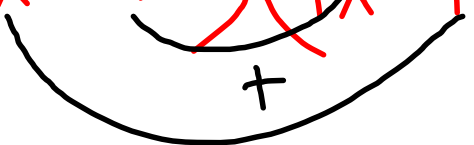
29-37

33.

$$16x^2y - 8xy + y$$

27
9.3

$$y(16x^2 - 8x + 1)$$

$$y(4x - 1)(4x - 1)$$


$$-4x \checkmark$$

$$-4x$$

$$y(4x - 1)^2$$

$$16x^2y \rightarrow 2 \cdot 2 \cdot 2 \cdot 2 \cdot x \cdot x \cdot y$$

$$-8xy \rightarrow -1 \cdot 2 \cdot 2 \cdot 2 \cdot x \cdot y$$

$$y \rightarrow y$$

$$GCF \rightarrow y$$

37.

$$x^3y - 9xy^3$$

$$xy(x^{\textcircled{2}} - \textcircled{2}y^{\textcircled{2}})$$

$$xy(x + 3y)(x - 3y)$$

$$x^3y \Rightarrow x \cdot x \cdot \boxed{x \cdot y}$$

$$-9xy^3 \Rightarrow -1 \cdot 3 \cdot 3 \cdot \boxed{x \cdot y \cdot y \cdot y}$$

$$\text{GCF} \Rightarrow xy$$

$$6x^2 + 48x + 72$$

$$6(x^2 + 8x + 12)$$

$$6(x + 2)(x + 6)$$

+
~~6x~~
~~2x~~ ✓

$$6x^2 \rightarrow 2 \cdot 3 \cdot x \cdot x$$

$$48x \rightarrow 2 \cdot 2 \cdot 2 \cdot 2 \cdot 3 \cdot x$$

$$72 \rightarrow 2 \cdot 2 \cdot 2 \cdot 3 \cdot 3$$

$$G(F \rightarrow 2 \cdot 3 = 6$$

$$x^2 - 1$$

$$x^3 - 1$$

$$x^4 - 1$$

$$(x+1)(x-1)$$

Difference
of
Two
Squares

$$x^2 - 1$$

$$x^3 - 1$$
$$(x^2 + 1)(x - 1)$$

$$x^3 - x^2 + x - 1$$

$$\begin{aligned}
 & x^3 - 1 \\
 & (x-1)(x-1)(x-1) \\
 & (x-1)(x^2 - \underline{x} - \underline{x} + 1) \\
 & (x-1)(x^2 - 2x + 1) \\
 & x^3 - 2x^2 + x - x^2 + 2x - 1
 \end{aligned}$$

$$x^3 - 1$$

$$(x - 1)(x^2 + x + 1)$$

$$x^3 + \cancel{x^2} + \cancel{x} - \cancel{x^2} - \cancel{x} - 1$$

$$x^3 - 1$$

$$x^3 - 8$$

$$(x-2)(x^2+2x+4)$$

$$x^{\textcircled{3}} - 125$$

$$(x - 5)(x^2 + 5x + 25)$$

Difference of
Two Cubes

$$8x^3 - 125$$

$$(2x - 5)(4x^2 + 10x + 25)$$

$$-20x^2 + 20x^2 + 50x - 50x$$

$$8x^3 - 125$$

$$(2x - 5)(4x^2 + 10x + 25)$$

$$-20x^2 + 50x$$

$$x^4 - 1$$

$$x^2 + 1$$

$$x^3 + 1$$

p. 32 41, 42